UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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ART UNIT	PAPER NUMBER
3714	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/728,904	ANDO ET AL.
	Examiner	Art Unit	
	Timothy Musselman	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *12/08/03*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first and second paragraphs of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and

distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

[1] With respect to claim 1, applicant refers to "the student terminal". Since a student terminal is not disclosed in the claims prior to this reference, there is a lack of antecedent basis for this imitation in the claim. Claims 2-8 are rejected for their incorporation of the above through their dependencies.

[2] With further respect to claim 8, applicant defines an information management server that depends from claims 7 and 1, "wherein said grouping section extracts locations matching the replies to said lecture-related information, and sorts said students into groups based on the inclusive relation of said matching locations". It is indefinite as to what 'locations' the applicant is referring. It is possible that the locations referred to by the applicant are the index locations of the lecture content defined in claims 3 and/or 4. However, since claim 8 does not depend from these claims, the limitations of 'extracting locations' and 'matching locations' are indefinite.

[3] With respect to claim 16, applicant defines an information management server that depends from claims 15 and 9, "wherein said grouping section extracts locations matching the replies to said lecture-related information, and sorts said students into groups based on the inclusive relation of said matching locations". It is indefinite as to what 'locations' the applicant is referring. It is possible that the locations

referred to by the applicant are the index locations of the lecture content defined in claims 11 and/or 12.
However, since claim 16 does not depend from these claims, the limitations of 'extracting locations' and
'matching locations' are indefinite.

[4] With respect to claim 19, applicant refers to "the students", "said lecture contents", and "said student
terminal". These items are not defined prior to these references in claim 19, thus there is a lack of
antecedent basis for these limitations in the claim.

Claim Rejections - 35 USC § 101

The following is a quotation of 35 U.S.C. 101:

Whoever invents or discovers any new and useful process, machine, manufacture, or

composition of matter, or any new and useful improvement thereof, may obtain a patent

therefor, subject to the conditions and requirements of this title.

**Claim 19 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-
statutory subject matter.**

[5] Claim 19 is explicitly defined as a computer program. Data structures not claimed as embodied in
computer-readable media are descriptive material per se and are not statutory because they are not
capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31
USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Also see MPEP 2106.

Claim Rejections - 35 USC § 102

The following is a quotation of the relevant sections of U.S.C. 102 that form the basis for the rejections
under this section of the office action:

(b) The invention was patented or described in a printed publication in this or a

foreign country or in public use or on sale in this country, more than one year prior to

the date of the application for patent in the United States

(e) The invention was described in — (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent

Claims 1, 5, 6, 9, 13, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Norcott et al. (US Patent 6,775,518).

[6] With respect to claim 1, the applicant describes an information management server that is capable of distributing lecture course contents to a student terminal. The server is further defined as containing storage for said lecture course contents, as well as storage for lecture related information (such as test questions), and storage for a 'matcher' section that matches lecture related information to lecture content. Regarding these limitations, Norcott et al. disclose in column 2, lines 30-37, a server based system for use in distributing educational material to users. The disclosed server is capable of data storage, and input/output with user terminals. In column 2, lines 62-65, Norcott el al. further define the data storage as including content media, a test database, and a content selection database, thus meeting applicants claimed limitations of an accumulator section to store electronic data on lecture contents, a holding section to hold lecture related contents, and a matcher section to link lecture related information with lecture contents. In Column 4, lines 25-30, Norcott et al. describe the communication capabilities between the server and a user terminal, thus meeting applicants claimed limitation of a 'send section'. The applicant further claims the limitations of an 'analyzer section' to analyze lecture content, and a 'control section' that selects lecture content linked to lecture related information based upon student replies to the lecture related information. The selected lecture content is sent to the user that sent the reply to the lecture related information. All of these limitations are met by Norcott el al. in column 6, lines 25-45. Norcott et al. disclose the process by which a system has the capability to send questions from the test database to the user, so as to test the comprehension level of the user with respect to the content media. Norcott et al. further describe how the user completes the questions, and sends them back to the server for analysis. Based upon the results of the comprehension analysis, the system selects relevant content

media that is sent back to the user. This content media may be either new or remedial in nature. Each question from the test database that is sent to the user is matched to a relevant portion of the main educational content through a content selection database. The system analyzes the available content media, so as to retrieve the portion that is matched to the comprehension material through the content selection database. The selected material is then sent back to the user.

[7] With respect to claim 5, the applicant discloses the system described in claim 1, and imposes the further limitation that the lecture related information sent to the student is in the form of practice problems, and the lecture content which is sent back to the student is based upon the replies to said practice problems. Norcott et al. meet these limitations by disclosing an educational server system that meets all of the limitations of claim 1 as described in paragraph 6 above, and further disclosing in column 6, lines 25-45, that the system is capable of sending test material to the users, which is related to the content media, and further selecting additional or remedial educational content to be sent back to the user based upon the replies of the user to said test material.

[8] With respect to claim 6, the applicant claims limitations described in claim 1, and imposes the further limitations that the control section edits the video information and sends supplemental learning contents to the student. Norcott et al. meet these limitations by disclosing an educational server system that meets all of the limitations of claim 1 as described in paragraph 6 above, and further disclose in column 6, lines 25-45, that the system is capable of creating educational content to be sent to each user based upon the reply of the users to test material. Norcott et al. disclose in the abstract that the educational material may be video data. Since the system in Norcott et al. is selecting content for the user that is a sub-portion of the available content, it is 'editing' the content that is sent to the student.

[9] With respect to claim 9, the applicant describes an information management server that is capable of distributing lecture course contents to a student terminal. The server is further defined as containing storage for said lecture course contents, as well as storage for lecture related information (such as test

questions), and storage for a 'matcher' section that matches lecture related information to lecture content. Regarding these limitations, Norcott et al. disclose in column 2, lines 30-37, a server based system for use in distributing educational material to users. The disclosed server is capable of data storage, and input/output with user terminals. In column 2, lines 62-65, Norcott el al. further define the data storage as including content media, a test database, and a content selection database, thus meeting applicants claimed limitations of an accumulator section to store electronic data on lecture contents, a holding section to hold lecture related contents, and a matcher section to link lecture related information with lecture contents. In Column 4, lines 25-30, Norcott et al. describe the communication capabilities between the server and a user terminal, thus meeting applicants claimed limitation of a 'send section'. The applicant further claims the limitations of an 'analyzer section' to analyze lecture content, and a 'control section' that selects lecture content linked to lecture related information based upon student replies to the lecture related information. The selected lecture content is sent to the user that sent the reply to the lecture related information. All of these limitations are met by Norcott el al. in column 6, lines 25-45. Norcott et al. disclose the process by which a system has the capability to send questions from the test database to the user, so as to test the comprehension level of the user with respect to the content media. Norcott et al. further describe how the user completes the questions, and sends them back to the server for analysis. Based upon the results of the comprehension analysis, the system selects relevant content media that is sent back to the user. This content media may be either new or remedial in nature. Each question from the test database that is sent to the user is matched to a relevant portion of the main educational content through a content selection database. The system analyzes the available content media, so as to retrieve the portion that is matched to the comprehension material through the content selection database. The selected material is then sent back to the user. The applicant describes the limitation of an instructor terminal connected to the network, which has the ability to connect to the information management server, as well as the ability to communicate with the student terminal. In column 3, lines 60-65, Norcott et al. meet this limitation by describing that an administrator can connect to the server through a remote terminal, so as to control the educational content available to the users. Norcott et al. further describe in column 6, lines 45-50, that user activities are recorded and reported to an

administrator. Since the administrator is able to take action in direct response to user activities, the user terminal can be said to be in communication with the administrator terminal, as both parties are interacting through the activities performed on the server system. Further, since the administrator is responsible for providing content and monitoring the performance of the users, the position of administrator and instructor are considered to be one and the same for the purposes of this office action.

[10] With respect to claim 13, the applicant discloses the system described in claim 9, and imposes the further limitation that the lecture related information sent to the student is in the form of practice problems, and the lecture content which is sent back to the student is based upon the replies to said practice problems. Norcott et al. meet these limitations by disclosing an educational server system that meets all of the limitations of claim 9 as described in paragraph 9 above, and further disclosing in column 6, lines 25-45, that the system is capable of sending test material to the users, which is related to the content media, and further selecting additional or remedial educational content to be sent back to the user based upon the replies of the user to said test material.

[11] With respect to claim 14, the applicant discloses the system described in claim 9, and imposes the further limitations that the control section edits the video information and sends supplemental learning contents to the student. Norcott et al. meet these limitations by disclosing an educational server system that meets all of the limitations of claim 9 as described in paragraph 9 above, and further disclose in column 6, lines 25-45, that the system is capable of creating educational content to be sent to each user based upon the reply of the users to test material. Norcott et al. disclose in the abstract that the educational material may be video data. Since the system in Norcott et al. is selecting content for the user that is a sub-portion of the available content, it is 'editing' the content that is sent to the student.

Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by Remschel (US Patent 6,411,796).

[12] With respect to claim 19, the applicant claims the limitation of a function that sorts students into groups based upon replies to lecture related information. in column 8, lines 45-50, Remschel meets these limitations by disclosing a distributed electronic learning system that has the ability to automatically sort students into groups based on data in a roster file. Remschel discloses in paragraph 4, lines 20–35, that roster data can contain information such as success on prior assignments and test results. Remschel further discloses in column 14, lines 40-45, and lines 60-65, that the testing and subsequent grading can be an automatic process. Applicant further claims the limitations of a function to display on the instructor terminal; information specified by a student, the learning progress of the student, and the terminal screen of the student. In column 4, lines 20-30, Remschel discloses that user data representing various parameters of learning progress can be displayed on the instructor terminal. In column 15, lines 5-15, Remschel discloses that the user terminal display can be viewed and controlled via the instructor terminal. It should be noted that the students' terminal screen, when displayed on the instructors' terminal screen, could contain information specified by the student. Applicant claims the further limitation of the instructor terminal being connected to an information management server for distributing lecture contents to a student terminal, and the instructor terminal capable of communication with the student terminal. Remschel meets these limitations by describing In column 6, lines 40-55, that communication channels are available between the user and instructor terminals, and in column 2, lines 20-30, by describing that the information provided to the student originates from a server on a network.

Claim Rejections - 35 USC § 103

The following is a quotation of the relevant sections of U.S.C. 103 that form the basis for the rejections under this section of the office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Claims 2-4 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norcott et al.

(US Patent 6,775,518) in view of Morton et al. (US Patent Application Publication 2005/0216443).

[13] With respect to claims 2 and 10, Norcott et al. disclose a system that meets the limitations of claims 1

and 9, as described in paragraphs 6 and 9 above. Claims 2 and 10 differ from Norcott et al. in that the

analysis of the educational content involves extracting text and/or drawing information from the video and

audio information contained in the content media, and using the extracted text as the basis for matching

the questions from the test database to relevant portions of the content media. Morton et al. teach in

paragraphs 58 and 59, that a system can be used to analyze timed media content, such that it extracts

text from all aspects of the media file, including video and audio, and saves the extracted data in a time

based index file, for the purposes of allowing the index file to be searched in an effective manner for

relevant time intervals which correspond to time intervals in the educational content. Morton et al. further

teach in paragraphs 19 and 20, that this system is ideally suited for automated learning systems.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use

the system described by Morton et al. in the system described by Norcott et al., so as to provide an

efficient and automated means for locating portions of the content media that are relevant to test

questions that were sent to a user.

[14] With respect to Claims 3 and 11, Norton et al. disclose a system that meets the limitations of claim 1

and 9 as described in paragraphs 6 and 9 above. Claims 3 and 11 differ from Norcott et al. in the same

manner as parent claims 2 and 10 as described in paragraph 13 above, and further differ in that the

questions from the test database are matched to the content media by analyzing the text information

extracted from the content media for locations where specified terms frequently occur. Morton et al. teach

in paragraphs 58 and 59, that a system can be used to analyze timed media content, such that it extracts

text from all aspects of the media file, including video and audio, and saves the extracted data in a time

based index file, for the purposes of allowing the index file to be searched in an effective manner for

relevant time intervals which correspond to time intervals in the educational content. In paragraph 60,

Morton et al teach that the index file can be searched using the clustering of occurrences of the search terms as a parameter. Morton et al. further teach in paragraphs 19 and 20, that this system is ideally suited for automated learning systems. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the system described by Morton et al. in the system described by Norcott et al., so as to provide an efficient and automated means for locating portions of the content media that are relevant to test questions that were sent to a user.

[15] With respect to Claims 4 and 12, Norton et al. disclose a system that meets the limitations of claim 1 and 9 as described in paragraphs 6 and 9 above. Claims 4 and 12 differ from Norcott et al. in the same manner as parent claims 2 and 10, as described in paragraph 13 above, and further differ in that the text extracted from the content media is indexed in a time-based fashion, and is searchable for locations where specified terms frequently occur, and is thus matched to corresponding time locations in the content media. Morton et al. teach in paragraphs 58 and 59, that a system can be used to analyze timed media content, such that it extracts text from all aspects of the media file, including video and audio, and saves the extracted data in a time based index file, for the purposes of allowing the index file to be searched in an effective manner for relevant time intervals which correspond to time intervals in the educational content. Morton et al. further teach in paragraphs 19 and 20, that this system is ideally suited for automated learning systems. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the system described by Morton et al. in the system described by Norcott et al., so as to provide an efficient and automated means for locating portions of the content media that are relevant to test questions that were sent to a user.

Claims 7, 8, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norcott et al. (US Patent 6,775,518) in view of Remschel (US Patent 6,411,976).

[16] With respect to claim 7 and 15, Norcott et al. disclose a system that meets the limitations of claims 1 and 9, as described in paragraphs 6 and 9 above. Claims 7 and 15 differ from Norcott et al. in that the

server contains a function to separate users into groups based on their replies to test questions. In column 8, lines 45-50, Remschel discloses a remote learning system that has the ability to automatically sort students into groups based on data in a roster file. Remschel discloses in paragraph 4, lines 20–35, that roster data can contain information such as success on prior assignments and test results. Remschel further discloses in column 14, lines 40-45, and lines 60-65, that the testing and subsequent grading can be an automatic process. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the grouping function described by Remschel in the education system described by Norcott et al., so as to provide an effective way of categorizing students by ability so as to lessen the burden of communication.

[17] With respect to claims 8 and 16, Norcott et al. disclose a system that meets the limitations of claim 1 and 9, as described in paragraphs 6 and 9 above. Claims 8 and 16 differ from Norcott et al. in the same manner as parent claims 7 and 15, as described in paragraph 16 above, and further differ in that the separation of users into groups is based on the matching index locations of each users selected content media (see paragraph 2), which is in turn based on user results to test questions. It should be noted that sorting the users by selected content media, where said content media is selected based exclusively upon user replies to test questions, is, in practice, separating users by replies to test questions. In column 8, lines 45-50, Remschel meets these limitations by disclosing a remote learning system that has the ability to automatically sort students into groups based on data in a roster file. Remschel discloses in paragraph 4, lines 20–35, that roster data can contain information such as success on prior assignments and test results. Remschel further discloses in column 14, lines 40-45, and lines 60-65, that the testing and subsequent grading can be an automatic process. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the grouping function described by Remschel in the education system described by Norcott et al., so as to provide an effective way of categorizing students by ability so as to lessen the burden of communication.

[18] With respect to claims 17 and 18, Norcott et al. disclose a system that meets the limitations of claim 9 as described in paragraph 9 above. Claims 17 and 18 differ from Norcott et al. in the same manner as parent claim 15, as described in paragraph 16 above. Claim 17 further differs in that the grouping of students can be displayed on an instructor terminal. This limitation is met by Remschel in column 8, lines 45-50, where an electronic learning system is disclosed that has the ability to automatically sort students into groups based on data in a roster file. Remschel discloses in paragraph 4, lines 20–35, that roster data can contain information such as success on prior assignments and test results. Remschel further discloses in column 14, lines 40-45, and lines 60-65, that the testing and subsequent grading can be an automatic process. Remschel further discloses in column 8, lines 55-60, that the user groups can be displayed via a graphical user interface on the terminal of the instructor. Claim 18 further differs from claims 9 and 15 in that an instructor terminal is capable of communicating to separate user groups in their entirety on an independent basis. In column 9, lines 5-15, Remschel discloses that exclusive communication to selected groups is available through a graphical user interface on the instructor terminal. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the grouping function described by Remschel, in the education system described by Norcott et al., so as to provide an effective way of categorizing students by ability so as to lessen the burden of communication.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy Musselman whose telephone number is (571)272-1814. The examiner can normally be reached on T-F 6:15AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Olszewski, can be reached on (571)272-6788. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application

Information Retrieval (PAIR) system. Status information for published applications may be obtained from

either Private PAIR or Public PAIR. Status information for unpublished applications is available through

Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC)

at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative

or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-

1000.

KATHLEEN MOSSER
PRIMARY EXAMINER

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